ABSTRACT

An optical detection system includes a planar waveguide optical coupler that is directly adjacent to a polarizing beam splitter. The planar waveguide optical coupler combines an input signal with a local oscillator signal and the polarizing beam splitter divides the combined optical signal into orthogonally polarized beams. The orthogonally polarized beams are detected by first and second optical detectors. In one embodiment, the planar waveguide optical coupler is in contact with the polarizing beam splitter, in another embodiment, the planar waveguide optical coupler is attached to the polarizing beam splitter, and in another embodiment, the planar waveguide optical coupler and the polarizing beam splitter are attached to opposite sides of a polarization rotator.